haps in diseases that are not pyrexial, there occurs a great disproportion between the nitrogen taken in food and the nitrogen eliminated. Physiology and chemistry unite to show that this elimination takes place chiefly at the cost of the muscular and nervous tissues—or perhaps it would be more accurate to say at the expense of the muscular tissue when it has lost some nervous quality necessary to the preservation of its integrity.

"A most interesting part of this question still remains to be considered. We have said that all recent physiology tends to show that in health the increased action of muscles causes either no increase in the amount of urea eliminated or only a very slight increase. Moreover, urea is not found in muscles, as it would almost certainly be if it were formed in them. Where, then, is urea formed, if not in muscles? We will content ourselves with referring our readers to the proofs so ably and interestingly stated by Dr. Parkes, that the transformation of albumen into urea takes place in the cells of the glandular system, especially in the liver. We have more than once directed the attention of our readers to the discovery that urea is formed in the liver. Meissner's discovery has been confirmed by others. E. Cyon has shown that blood leaving the liver has much more urea in it than when it enters. Pathology, too, has given proof of the urea-forming function of the liver, by showing that withering and destruction of the liver-tissue is connected with an important diminution in the formation of urea. It is evident that, though our notions of the functions of the liver have been already greatly revolutionized by physiology, this organ must be regarded more than ever in our attempts to explain and treat disease. The vague but common states of biliousness, as well as of those graver forms of liver disease in which the patient dies comatose as if from uræmia, may receive elucidation from the discovery of the urea-forming function of the liver. These states may be connected with an excess of nitrogenous food which cannot be transformed into urea, and so loading and oppressing the system; or they may be induced by substances which chemically or physiologically interfere with the urea-forming function of the liver and other glands. At any rate, medical men must feel indebted to physiologists for disclosing the great fact, that the production of urea takes place certainly in the liver, and probably in other gastro-intestinal glands; and that the amount of it can be greatly controlled by having respect to the nature of the food given. Most physicians will agree with Dr. Parkes in thinking that these discoveries in physiology dictate the necessity of a reconsideration of the dietetic doctrines which have lately been prevalent in the profession, and especially that of the value of large quantities of nitrogenous food, either in pyrexial states or in states where the disposing and transforming power of the system or of its glands is temporarily in abeyance. 'I believe from experience,' says Dr. Parkes, 'though speaking with great reserve, that the almost exclusively animal diet sometimes given in fevers is not so useful in sustaining strength as is supposed; and that, if it were not for the loss of appetite which limits the supply, we should perceive more clearly the bad effects.' Dr. Parkes thinks that in fevers starches and fat should be used more freely."

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4. *Function of the Spleen.*—Dr. MOSLER, in association with Dr. SCHINDELER, has been engaged in a series of experiments with the view of testing, if possible, the function of the spleen. The results of these experiments will shortly appear in a monograph on "The Pathology and Therapeutics of Leukæmia;" Dr. M. has, however, considered it advisable to make public, in anticipation of the appearance of the monograph, the results of thirty experiments in which ablation of the spleen was practised. This has been done in the *Centralblatt f. d. Med. Wissenschaften*, for May 13, 1871, No. 19. The results of the experiments are as follows:—

1. The existence of the spleen is nowise essential to the life of the animal.
2. After extirpation or artificially produced atrophy of the spleen the functions of the remaining lymphatic organs are increased in activity. The medulla of the bones, in the cases of the ablation of the spleen, is observed for a long time after to have undergone a remarkable change resembling leukæmia (*Neumann*). A hyperplastic condition of the lymph-glands is not always observed.
3. The vicarious activity of these glands, which would appear to be connected

with many external conditions, is in animals deprived of their spleen, not always complete, as, especially in the first months subsequent to the extirpation or the artificially induced atrophy of the spleen, an abnormal alteration in the blood can be detected, from which circumstance it is to be inferred that the spleen is directly concerned in the process of hæmatosis. By the experiments of Dr. M. it would appear that this influence of the spleen is exercised in the development as well of the white as of the red corpuscles.

4. On the stomachic and pancreatic digestions the removal of the spleen exercises no influence; besides the proof of this derived from chemical analysis, we have the further evidence that in animals deprived of their spleen loss of appetite is a very uncommon occurrence. D. F. C.

5. *Absence of the Spleen in a New-born Infant.*—Dr. Birch-Hirschfeld relates an example of this congenital defect in an apparently well-formed and normally developed infant that died within a few hours after birth. The post-mortem exhibited within the cavities of the cranium and thorax no apparent deviation from the normal condition. In the abdominal cavity the first thing that attracted attention was the enormous size and unusual position of the liver; it filled to an equal extent the left as well as the right hypochondrium; it was of great weight (208 grms.). The left and right lobes were in circumference and conformation entirely symmetrical. On the other hand, not a trace was left of the spleen, or even of one of the splenic arteries or veins. The gall-bladder and ducts, hepatic arteries and veins, showed their normal proportions, while the portal vessels, by their uncommon calibre, bore a near relation to the increased volume of the liver. By a microscopical examination of their tissues there was found to be absent the disproportionate wide spread of the portal ramifications. The acini were filled with blood-corpuscles. The remaining abdominal organs were in their normal position and unaltered.—*Centralblatt f. d. Med. Wissenschaften*, June, 1871, No. 24. D. F. C.

6. *Origin of Life.*—At the recent meeting of the British Medical Association for the Advancement of Science, Dr. Charlton Bastian described some new experiments he had made in relation to the origin of life, and said that the result of these led him to the conclusion that living matter might arise *de novo*, and that this living matter might go on to the development of certain common organic forms, just as surely as any speck of crystalline matter in a fluid might take on and assume certain definite characters which belonged to that saline substance in its crystalline condition. His experiments showed that living organisms had been found in fluids exposed to a temperature higher than was sufficient to destroy germs.—*British Med. Journal*, August 19, 1871.

7. *Spontaneous Generation.*—Dr. Ferrier gave an account, at the recent meeting of the British Association for the Advancement of Science, of certain experiments made by him in conjunction with Dr. Burdon Sanderson, with a view to discover the circumstances which determine the existence of bacteria in the liquids and tissues of the body. The paper had reference to certain results obtained in the course of an investigation into the ultimate nature of contagion. It was shown that in the test liquids which they used for the detection of organisms in contagious fluids, no spontaneous evolution of organisms takes place. The occurrence of organisms in these liquids was in proportion to the degree of external contamination. Fungi (*penecillium*) is the chief form which is derived from the air. The occurrence of bacteria is, however, due to water. It was shown that every kind of water, with the exception of freshly distilled water, teems with invisible germs of bacteria. These cannot be detected by the microscope, or by the electric beam in the manner adopted by Professor Tyndall. The purest-looking ice-water was found to contain as many germs as others which had not the same apparent purity. Different varieties of water possess the zymotic power, as they term it, in different degrees. The water supplied by the London water-companies was examined, and different degrees of bacteria impurity were found to exist. They further showed that the animal liquids and tissues do not, in the normal state, contain the germs of bacteria,